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10/661,748

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Simon Tong

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EXAMINER

PARDO, THUY N

ART UNIT

PAPER NUMBER

2168

MAIL DATE

DELIVERY MODE

10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/661,748

Applicant(s)

TONG ET AL.

Examiner

Thuy N. Pardo

Art Unit

2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/18/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's Amendment filed on July 18, 2007 in response to Examiner's Office Action has been reviewed. Claims 1-58 are pending in the application. Claims 1, 27 and 53 are independent claims. Claims 1-27, 39, 48-51 and 53-57 are amended. This Office Action is made Non-Final.

2. Applicant's arguments, see pages 1-4, filed on July 18, 2007, with respect to Yadav publication's priority to provisional application 60/358,870 have been fully considered and are persuasive. The rejection based on Yadav publication has been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-52, 57 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corston-Oliver et al. (Hereinafter "Corston-Oliver") US Patent No. 6,901,402 in view of Yayoi et al. (hereinafter "Yayoi") US Patent application Publication No. 2003/0149704 A1.

As to claim 1, Corston-Oliver teaches the invention substantially as claimed, comprising:
receiving a first search query [first textual input, ab; fig. 3A; col. 7, lines 64-67];

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receiving a second search query [second textual input, ab; fig. 3A, col. 8, lines 21-22];
identifying a relationship between the first search query and the second search query
based at least in part on a criterion [determining a relationship between first and second textual
inputs based at least in part on a criterion (i.e., predetermined grammatical rules), ab; fig. 3A;
col. 8, lines 7 to col. 9, lines 14].

However, Corston-Oliver does not explicitly teach determining a first article associated
with the second search query, determining a first ranking score for the first article based at least
in part on data associated with the first search query and outputting a search result comprising
the first article although it has the same functionality of determining whether any matches exist
between the content word in the second textual input and the words remaining in the document
of the first textual input [col. 12, lines 24-42].

Yayoi teaches determining a first article associated with the second search query
[retrieving information using a second search query, see the abstract]; determining a first ranking
score for the first article [ranking retrieved documents, fig. 2] based at least in part on data
associated with the first search query [second search query has the first element of the first
query, see the abstract; 901 and 901a of fig. 10], and outputting a search result comprising the
first article [output 006 having D1, D2 and D3 of fig. 10].

Therefore, it would have been obvious to one of ordinary skill in the Data Processing art
at the time of the invention to add the feature of Corston-Oliver to the system of Yayoi as an
essential means to optimize search operation of finding objects containing the data of interest to
users.

As to claim 2, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the data associated with the first search query comprises a total selection score for the first search query [rank for the first query, 902 of fig. 10].

As to claim 3, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the total selection score comprises a total number of users that selected a result returned for a search for the first search query [902 of fig. 10].

As to claim 4, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches the data associated with the first search query comprises an instance score for the first search query [ranking D1, D2 and D3 for the first query, 902 of fig. 10].

As to claim 5, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the instance score comprises a number of instances the first article was shown in a search result for the first search query [D1, D2 and D3 for the first query, 902 of fig. 10].

As to claim 6, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the data associated with the first search query comprises a selection score for the first article [ranking D1, D2 and D3 for the first query, 902 of fig.].

As to claim 7, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the selection score for the first article comprises selections made in search results for the first search query in a context of the search query [ab; 901-1006 of fig. 10].

As to claim 8, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the total selection score for the first related query comprises selections made in search results for the first search query in a context of the second search query [ab; 901-1006 of fig. 10].

As to claim 9, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the instance score for the first search query comprises selections made in search results for the first search query in a context of the second search query [ab; 901-1006 of fig. 10].

As to claim 10, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the number of instances the first article was shown in a search result for the first search query comprises instances shown in a context of the second search query [ab; 901-1006 of fig. 10].

As to claim 11, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the first search query data associated with the first search query

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comprises a second selection score for a second article associated with the first search query [ab; 902, 1002 of fig. 10].

As to claim 12, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that determining the first article associated with the search query comprises determining the first article associated with the search query and with the first search query [902 of fig. 10; ab].

As to claim 13, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches determining a first selection score for the first article when associated with the first search query, and wherein determining the first ranking score for the first article based at least in part on data associated with the first search query comprises determining the first ranking score for the first article based at least in part on the first selection score [901-1006 of fig. 10; ab].

As to claim 14, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches determining an initial search result for the search query, the initial search result comprising the first article and determining that a search result for the first search query comprises the first article [ab; 902 of fig. 10].

As to claim 15, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that the first article comprises a representation of the first article [ab; 902 of fig. 10].

As to claim 16, Corston-Oliver and Yayoi teach the invention substantially as claimed. Corston-Oliver further teaches the representation of the first article comprises a uniform resource locator [col. 14, lines 55 to col. 15, lines 8].

As to claim 17, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that determining the first ranking score for the first article when associated with the first search query comprises determining a number of times the first article was selected when presented in search results for the first search query [902 of fig. 10; ab].

As to claim 18, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that determining the number of times the first article was selected when presented in search results for the first search query comprises determining a number of clickthroughs for the first article when presented in search results for the first search query [218 of fig. 2B; fig. 9].

As to claim 19, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that determining the first ranking score for the first article comprises: determining a first initial ranking score for the first article when associated with the search query

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and calculating a mathematical function comprising the first initial ranking score and the first selection score [1002, 1006 of fig. 10, ab].

As to claim 20, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that calculating the mathematical function comprising the first initial ranking score and the first selection score comprises combining the first initial ranking score and the first selection score, weighted with at least one weighting factor [1002, 1006 of fig. 10; ab].

As to claim 21, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that calculating the mathematical function comprising the first initial ranking score and the first selection score comprises combining the first initial ranking score and the first selection score, normalized with at least one normalization factor [col. 9, lines 26-40].

As to claim 22, Corston-Oliver and Yayoi teach the invention substantially as claimed. Corston-Oliver further teaches that determining a second article associated with the second search query; and (f) determining a second ranking score for the second article based at least in part on data associated with the first related query [col. 8, lines 16-24].

As to claim 23, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches ranking the first article and the second article based at least in part on the first ranking score and the second ranking score [1002, 1006 of fig. 10].

As to claim 24, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches providing a search result for the search query having the first article and the second article ranked according at least in part to the first ranking score and the second ranking score [fig. 10; ab].

As to claim 25, Corston-Oliver and Yayoi teach the invention substantially as claimed. Corston-Oliver further teaches determining a second search query related to the search query, and wherein determining the first ranking score for the first article is further based at least in part on data associated with the second search query [ab; fig. 3A].

As to claim 26, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that determining the first search query further comprises determining a query previously made consecutively with the search query [fig. 10; ab].

As to claim 27, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches program codes [a computer code, 0035; 0036].

As to claim 57, Corston-Oliver and Yayoi teach the invention substantially as claimed. Yayoi further teaches that criterion is at least one of an order of submission, a time period, a misspelling relationship, a synonym relationship, and antonym relationship, or an acronym relationship [0032-0033].

As to claims 28-40, 42-52 and 58, these claims are apparatus claims of claims 1-26 above, therefore, these claims are rejected under the same rationale.

4. Claims 53-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corston-Oliver et al. (Hereinafter "Corston-Oliver") US Patent No. 6,901,402 in view of Yayoi et al. (hereinafter "Yayoi") US Patent application Publication No. 2003/0149704 A1, in further view of Prince US patent No. 6,877,002.

As to claim 53, Corston-Oliver and Yayoi teach the invention substantially as claimed as specified in claim 1 and 27 above. However, neither Corston-Oliver nor Yayoi teaches the feature of determining at least one quality signal for a first article from the plurality of articles, wherein the quality signal is associated at least in part with the first search query although it has the same functionality of submitting queries to search engines to find information of interest to the user. Prince teaches determining at least one quality signal for a first article from the plurality of articles, wherein the quality signal is associated at least in part with the first search query [data signal having a qualify keywords code segment for qualifying metadata if the score is equal to or greater than a predetermined threshold, col. 18, lines 14-18] and calculating a first ranking score for the first article based at least in part on the quality signal [col. 18, lines 14-18, 50-55; ab]. Therefore, it would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to add the feature of Prince to the Yadav-Yayoi's system as an essential means to optimize search operation of finding objects containing the data of interest to users.

As to claim 54, Corston-Oliver, Yayoi and Prince teach the invention substantially as claimed. Yayoi further teaches ranking the first article against at least some of the plurality of articles based at least in part on the first ranking score [ranking of retrieved results, fig. 9].

As to claim 55, Corston-Oliver, Yayoi and Prince teach the invention substantially as claimed. Prince further teaches that the quality signal comprises clickthrough data [inherent in the system since quality signal is URI].

As to claim 56, Corston-Oliver, Yayoi and Prince teach the invention substantially as claimed. Yayoi further teaches that the first ranking score for the first article is calculated based at least in part on the relationship of the first search query and the second search query [0031-0036].

Response to Arguments

5. Applicant's arguments with respect to claims 1-58 have been considered but are moot in view of the new grounds of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy N. Pardo whose telephone number is 571-272-4082. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on 571-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thuy N Pardo
Primary Examiner
Art Unit 2168

A handwritten signature in black ink, appearing to read 'Thuy N. Pardo', with a long, sweeping horizontal stroke extending to the right.

THUY N. PARDO
PRIMARY EXAMINER